

## “Reflection on the co-chairs panel: Discussion on potential criteria for assessing DSI policy options”

Wednesday 24 March 2021 13:00 CET (Zoom)

### I. Introduction

The webinar “Reflection in the co-chairs panel: Discussion on potential criteria for assessing DSI policy options” was an informal exchange among Margo A. Bagley, Alejandro Lago Candeira, Henry de Novion, Paul Oldham and Siva Thambisetty with extensive experience at the national and global level in a range of fora. It aimed to serve as a useful input to the formal processes by providing constructive and concrete ideas to feed into OEWG, COP and those preparing for these key meetings. The broad objective of the webinar was to identify **landing zone(s) for safeguarding DSI flow and the sharing of benefits**. It served as an informal start to evaluating policy options for consideration of stakeholders and Parties. Under authority of the OEWG co-chairs, a **series of six policy options** have been formulated by the SCBD based on works of several experts and stakeholders as a way of organizing thinking around DSI. It was highlighted that these options are meant to clarify, not to constrain.

The overarching policy-making context in which this webinar was taking place is well beyond the subject matter (DSI) itself. The context is even bigger than the critical decisions to be taken at the COP in Kunming. **The policy objective is about biodiversity (the 3 objectives of the CBD) and the survival of our planet**. The real objective of an ABS policy is to mobilize scientific, technological and financial resources for biodiversity conservation. In order to have an informed negotiation at COP and beyond, it is imperative to have a clear sense of the range of possible policy options as they develop, some idea of the costs and benefits of these options, and a vision (even if competing) of where policy advancement can be achieved.

COP Decision 14/20 noted there is a **divergence of views among Parties** regarding benefit-sharing from the use of DSI on GR. It also notes that Parties are committed to working towards resolving this divergence, with the aim of strengthening the fulfilment of the 3<sup>rd</sup> CBD objective. To this end, a science- and policy-based process on DSI on GR was established. DSI is expected to play a major role in the negotiations of the Post-2020 Global Biodiversity Framework. The science- and policy-based process is creating the basis for a significant advancement in awareness and understanding.

Any solution should address the two phases of using DSI:

- (1) **DSI generated from GR** (accessed under PIC and MAT) and used by first user.
- (2) **DSI is accessed in databases** and used by subsequent users.

This report summarizes the input of the experts in five topics which emerged to be of main interest during the panel discussions.

Stakeholders are **wide ranging and diverse**, including, but not limited, to:

- ✓ biodiversity researchers
- ✓ INSDC, other database managers
- ✓ Biorepositories
- ✓ Indigenous Peoples
- ✓ industry, private and public sectors
- ✓ funding agencies
- ✓ publishers
- ✓ governments
- ✓ **the environment** (an often-overlooked stakeholder!)

## II. Basic facts on generation and use of DSI

- Some countries have moved into Option 1. Other countries are still discussing how to address DSI. In the technical discussions, nobody argued that DSI does not come from the utilisation of GR. The key challenge is how to address this specific issue.
- The DSI deadlock is not desirable for anyone. It is short-sighted to try to anticipate the capture of benefits from DSI by trying to control its use, since benefits will only materialise if access to DSI is open and facilitated.

## III. Current role of IPLCs and relation to DSI

- UN's current principle is to "leave no one behind", but haven't the current discussions already left IPLCs behind?
- IPLCs are affected by decision-making on DSI for a range of different reasons, e.g. collection of samples that are later subjected to sequencing.
- IPLCs safeguard 80 % of the world's remaining biodiversity. We don't have DSI if we don't have IPLCs that are actively enhancing and preserving biodiversity for us. So much biodiversity has not yet been analysed. Even though DSI is separate from TK, it would be erroneous to think that the knowledge of IPLCs did not and does not still contribute to the existence of the biodiversity from which DSI is obtained.
- TK can be relevant for DSI (e.g. identification of variety of plants for agriculture, sequencing of rice varieties to identify properties of those plants).
- A key challenge: losing great progress on NP and CBD and recognizing the importance of UN Declaration on the Rights of Indigenous Peoples. But how to recognize the rights of IPLCs in practical and operational terms?
- By a project called <https://localcontexts.org/>, a labelling system for digital objects involving TK, has been extended to genomic observatory meta database. The initiative comes from indigenous peoples who are data experts who propose to include IPLCs' own digital labels in digital objects (making them findable, accessible and interoperable for IPLCs themselves). This is a promising avenue for further debates.
- The priority should be to think about IPLC's participation in the construction of BS for DSI. IPLCs are on the frontlines of the defence of biodiversity around the planet. However, IPLCs livelihoods are affected by biodiversity loss, etc.
- There is a tendency to regard DSI as a separate subject, we need to bring this back. If there is BS, shouldn't it be benefitting IPLCs?

## IV. Current positions on benefit sharing (e.g. implicit/explicit)

- Various views about the need for monetary BS because DSI and open access is seen as non-monetary benefit.
- Non-monetary benefit-sharing should be part of any solution.

- Monetary BS obligations should be shared by the user through a global BS mechanism, also governed by the Parties, and if, the DSI origin is identifiable the global mechanism would in turn channel those resources to the provider countries. When the DSI has no country tag, is cosmopolitan, or is distributed across jurisdictions and taxa, the global mechanism would collect the benefits and apply them to funding global, regional or sub-regional conservation initiatives.

## V. Main concerns of stakeholders

### *General observations*

- Importance of seeing stakeholder positions not as positions, but as positioning. It is a dynamic process.
- Use of proxies - when stakeholders talk about certain terms or concerns, what are they actually talking about?
  - Sovereignty and loss of national patrimony when it comes to DSI as an underlying concern over control. Need to determine how to hand control back, e.g. via tagging in databases or through IP systems.
  - Another key proxy: *science as a public good*. Most often it's a proxy for continuing to do science as it is currently done → *Status quoist approach*.
- Issue of differential weighting
  - Different stakeholders weigh concerns differently based on certain invisible criteria that may not be self-evident; e.g. the administrative burden to scientists is “talked up” while capacity building and huge gaps in technology tend to be “talked down”. There is a need to have very specific goals on capacity building to address the problem of differential weighting.

### *Specific concerns*

- Researchers are worried about continued open access to DSI, to databases and to information as it is the key characteristic that makes the system extremely productive and successful for them. The tension comes from governments that are worried about BS.
- Concerns about access restrictions on DSI as well as tangible resources
- Concerns about different national laws and approaches with which they have to comply dealing with DSI and BS
- Concerns about the expansion of the bilateral ABS system to DSI. Many researchers had negative experiences with bilateral ABS system for variety of reasons and are therefore not eager to see the system expanded to include DSI.
- Concerns about financial impacts and obligations. Distinctions among academic researchers vs industry / commercial researchers who are concerned about financial obligations (e.g., fees for access to DSI). These concerns are also shared by researchers in developing countries vs higher-income countries.
- Concerns about the infrastructure of the DSI database system; a lot of money flows into that. How should that be factored into any sort of additional approach on DSI BS?
- Questions of value of a particular sequence – the use of DSI might have happened very early in the development of the final product. Some of the approaches that involve tracking / tracing may not seem realistic. How to take that value component into consideration?
- Some researchers see the use of DSI as similar to reading a scientific journal, but others see it as an equivalent to requesting a material sample. It shows the variety of different views, many concerns and perspectives among researchers.
- While more involvement from the research and scientific community is being observed, some researchers are still caught in the “cycle of acceptance”. Everyone needs to come on board in order to make it work.

- IP holders /patent holders and IPR experts as a group of stakeholders have a variety of concerns focusing specifically on patents, for instance concerns about IP offices as NP checkpoints, and the possibility that BS obligations can lead to delays in obtaining patent protection, legal certainty concerns, transaction costs, etc.

## VI. Checking options & combination of them against main points of considerations (the panelists gave examples of their main points and then argued for and against certain options)

### General observations

- Difference between modalities and principles: There is a tendency to forget that modalities work in the service of legal principles. We may agree on modalities, but we may disagree about whether the equitable outcomes where in fact met. Being upfront about it is important!
- The experience from the negotiations on an ABS regime for biodiversity beyond national jurisdiction (BBNJ) shows that the comparison between bilateral and multilateral architecture is important. BBNJ discussions are ongoing without establishing the status of marine GRs. Whether at the level of the CBD implementation of Art. 3 and 4b and possible decisions on DSI will lead to supplanting the bilateral architecture needs to be borne in mind.

### Specific observations

<b>Option considered</b>
2.2. Multilateral, no PIC for DSI use and with standard MAT agreed terms at international level with elements of option 2.1. (BS triggered at commercialisation of products based on DSI and channelled back to countries of origin, when possible).
<b>Deliverables</b>
For example, the potential to generate benefits, enhance the ability to meet the SDGs, etc.
<b>Main points</b>
<ul style="list-style-type: none"> <li>• There is a need for <u>tangible, quantifiable benefits</u> returning to biodiversity.</li> <li>• <u>Non-monetary benefit-sharing</u> should be part of any solution as well as some sort of multilateral mechanism.</li> <li>• Having a <u>clear trigger for BS obligations</u> and figuring out what the trigger could be is essential.</li> <li>• <u>Avoid “all eggs in one basket” approach</u> to BS. Focus on spreading BS across different kinds of modalities.</li> <li>• Monetary resources from <u>products commercialisation</u>, but also <u>technological resources and generation &amp; exchange of relevant scientific information on biodiversity</u> are key.</li> <li>• Monetary BS obligations should be shared by the user through a <u>global BS mechanism</u>, also governed by the Parties, and if, the DSI origin is identifiable the global mechanism would in turn channel those resources to the provider countries. When the DSI has no country tag, is cosmopolitan, or is distributed across jurisdictions and taxa, the global mechanism would collect the benefits and apply them to funding global, regional or sub-regional conservation initiatives.</li> <li>• Doubtful whether a global mechanism is the solution because it places BS far from the providers &amp; TK holders and adds bureaucracy. Other tools can produce the same effects.</li> <li>• Focus on <u>mainstreaming ABS into the CBD and into other policies</u>. The lack of integration in the case of ABS is problematic because it concerns not only biodiversity conservation, but also research and health, etc. Not many ministries in charge of research are participating in negotiations.</li> <li>• Focus on the SDGs</li> </ul>
<b>Option considered</b>
2.2. with option 4 embedded in option 2.2. and elements of 3.2. where there is a multilateral system and not just voluntary contributions (but obligatory contributions). Option 4 has to be a part of 2.2. for this to make sense.

<b>Governance aspects</b>
For example, enforceability, inclusiveness and recognition of the priorities of all stakeholders
<b>Main points</b>
<ul style="list-style-type: none"> <li>• Key question to be posed: To what extent are we willing to relinquish a certain level of sovereignty over the control of DSI use to gain access to the beneficial outcomes of open DSI use?</li> <li>• A purely bilateral approach for DSI use won't meet any particular stakeholder expectations, nor will a system that can't link benefit-sharing to countries of origin.</li> <li>• <u>Setting new legal norms</u> will lead to behaviour change. Accepting that will make the process easier.</li> <li>• <u>Agenda setting</u>: stakeholders need to participate in the discussions from the beginning, but with a preponderance of stakeholders from certain jurisdictions there is a danger that the agenda is set by only them.</li> <li>• Important principles to think about: <ul style="list-style-type: none"> <li>○ Simplicity</li> <li>○ Ease of compliance</li> <li>○ A system that provides legal certainty regarding obligations and meeting those obligations</li> <li>○ Having a clear trigger for BS obligations and figuring out what the trigger could be.</li> </ul> </li> <li>• Consider adoption of a policy focussing on DSI use – outcomes regularisation through a multilaterally governed system. A <u>one-stop-shop</u> system for the registration of all results of DSI use, incl. those with country tags.</li> <li>• A <u>consensus approach</u> would need to have low transaction costs, legal certainty, clear triggers, differentiated obligations and a governance regime that allows for fair and equitable structuring of monetary distributions to address various stakeholder concerns.</li> <li>• Measures that are introduced need to be <u>phased</u>.</li> <li>• The <u>issue of scale</u> needs to be considered (dealing with all the Parties around the world, BBNJ, databases distributed around the world).</li> <li>• <u>Coherence</u> is needed, i.e., understanding proxies and differential weightings, modalities and how they link to principles and compliance. Without enforcement and compliance, the whole set-up is leaky. A system of reciprocal compliance may be needed.</li> <li>• Key question to be posed: what degree of control state parties can and want to exercise over private sector? What are measures to obligate them? (Art. 66 No. 2 TRIPS agreement).</li> <li>• Researchers can be partners in the compliance ecosystem (many scientists are surprised not to be asked by the patent system to declare origin).</li> </ul>

<b>Option considered</b>
2.2.
<b>Operational aspects</b>
For example, workable for different types of users, ability to be implemented timely / quickly
<b>Main points</b>
<ul style="list-style-type: none"> <li>• Any system needs to be <u>practical</u> and <u>pragmatic</u>.</li> <li>• Practical solutions achieved by mutual understanding and transparency will arise if the <u>focus of regulation is on results (outcomes of DSI use) instead of processes (like downloading, exchanging, using)</u>. Processes used to extract the potential value of GR in the form of information will always be in constant evolution and change. If we continue to regulate processes based on techniques, we will always chase technological advances, and filling gaps in outdated systems. If we regulate the products of the use of biodiversity components in spite of advancements in science, they will be translated into papers, patents and products which can be quantified, monitored by checkpoints and integrated with NP traceability system.</li> <li>• <u>Standardisation</u> is important in order to lower transactions costs and ease access.</li> <li>• <u>Licences</u> increase transparency. Suggestion: negotiate a set of standard interoperable licenses, adapted to particular circumstances, which would improve transparency and clarity on terms of use for all users.</li> </ul>
<b>Option considered</b>
2.2.
<b>Economic aspects</b>

For example, the cost of setting up and maintaining the system, economic of information, etc.

**Main points**

- Think about the nature of DSI as an asset. What kind of asset is it and how is the value of this asset realised? Genomics is an exercise of comparing and contrasting. The value of a genome is zero unless you compare and contrast it to another genome. The economic or any other value of DSI as a form of asset can only be realised by sharing it. If Parties insist on pursuing a route that focuses on grasping the maintaining control over the asset, they will never realise the value of the asset. This implies the need for a capture system.
- The issue of capturing the point of final commercialisation is tricky. There is a need for a wider range of measures as income-generating opportunities and a system that responds to technological change and grows with it.
- The control of use is most likely impossible to be addressed in a bilateral way, as it will be costly to all stakeholders due to DSI's very nature. Practical solution: one in which the idea of control of use and that of evading it are less important for all ABS stakeholders than the idea of meeting the required conditions for the mobilization of resources to promote conservation.
- Further thinking is needed on income-generating options (e.g. membership fees, subscription fees, cloud-based models / infrastructure charges, micro levy, BS on commercialisation). The costs of these options need to be determined in order to have more effective evidence-base and modelling for assessing their feasibility.
- The "global mechanism" could also be held nationally with benefits also being distributed nationally without costing a fortune to run.

**Option considered**

*No option was indicated here*

**Potential impacts**

For example, not disruptive to open access, no barriers to attaining the SDGs, etc.

**Main points**

- Covid-19 story: success of science, but also failure of moral obligation. The way the vaccines are distributed is potentially a catastrophic failure. Are we unwilling to exercise control over private sector and the property rights that the private sector own?
- Ensure flexibility in the use of funds received. NP does not require Parties to use monetary funds for conservation. It is important to remain flexible in terms of direct AND indirect support for conservation (which could include IPLC economic development). Putting too much constraint on how the money is used could backfire in terms of our desire for biodiversity conservation.

**Option considered**

*No option was indicated here*

**Capacity**

For example, ability to use DSI globally

**Main points**

- Open access under terms and conditions is a practical solution, adopting a multilateral bounded openness option could keep DSI download, use and exchange open, under ToC that would guarantee BS for conservation.

**Option considered**

*No option was indicated here*

**Other aspects**

For example, realistic expectations, consideration of the environmental footprint

**Main points**

- The control of use should be seen as a means and not an end in itself, similarly BS should also be seen as a means, to guarantee that all will benefit from healthy and conserved biodiversity. The ABS community needs a practical solution that is more aligned to the original idea of ABS - which is to be the tool to build transparency

and mutual understanding to generate scientific, technological and financial resources to promote biodiversity conservation for the benefit of all.

- In the near term, it is important to safeguard the bilateral approach for tangible GR while exploring a multilateral option for DSI, see if it works for DSI and then explore whether it is productive to incorporate it more broadly.

## VII. Wrap-up by Timothy Hodges

1. Benefit sharing is not just an objective, it is a means to an objective.
2. Silos, e.g., intellectual, ministerial, can lead to maintaining divisions in terms of our thinking and behaviour. Solutions will be more holistic if we take joint decisions.
3. Simplicity is key. We are not looking for perfection but for practical, real change.
4. Efficiency is important. A reasonable balance between costs and benefits is needed.
5. Capacity development / technology transfer were identified as important considerations.
6. DSI policy options are not mutually exclusive.
7. Scaling in terms of policymaking is a useful concept in the context of implementing any new DSI governance measures.
8. Equity and transparency are key elements.
9. “Environment as a stakeholder” is a powerful concept which is not much employed in international affairs. Importantly, it reminds of the world view of many Indigenous Peoples – which is a holistic view of the world, where there isn’t the Western concept of separation between nature and us.

## VIII. Annex with Options and Consideration Points and links to webpages and documents

<b>DSI Policy Options</b>	
<p><b>Option 0</b> <i>Status quo</i></p>	<p><b>Parties have not agreed on how to address ABS for DSI of GR.</b> Some Parties may decide to include measures on access to DSI and/or benefit-sharing from DSI use as part of their domestic ABS system.</p>
<p><b>Option 1</b> <i>DSI fully integrated into CBD and NP</i></p>	<p><b>ABS is subject to each country's legislation.</b></p> <ul style="list-style-type: none"> <li>• Access to DSI regulated similarly to access to genetic resources. <b>GR = DSI</b></li> <li>• MATs are negotiated for each DSI access</li> <li>• Users need to comply with multiple different ABS systems and requirements</li> </ul>
<p><b>Option 2</b> <i>Standard MAT</i></p>	<p><b>Benefit-sharing from the use of DSI is triggered by events through the value chain.</b></p> <ul style="list-style-type: none"> <li>• Trigger could be IPR granting, commercialization</li> <li>• Requires downstream monitoring of DSI use along the value chain</li> </ul> <p><b>2.1. Each country has standard MAT</b></p> <p><b>Each Party could put in place a system of standard MAT</b></p> <ul style="list-style-type: none"> <li>• Users would need to comply when the obligation to share benefits is triggered (e.g. at commercialization)</li> <li>• Example: Brazil's ABS measures</li> </ul> <p><b>2.2. Standard MAT at international level</b></p> <p><b>Integrated in DSI databases</b></p> <ul style="list-style-type: none"> <li>• Different standard licenses could be negotiated at the international level and included in DSI databases</li> </ul> <p><b>Integrated in IPR systems</b></p> <ul style="list-style-type: none"> <li>• Users are informed of their obligations when seeking for IPR protection on the basis of a disclosure requirement on the use of DSI</li> </ul> <p><b>Others...</b></p>
<p><b>Option 3</b> <i>No PIC, no MAT</i></p>	<p><b>Access is not restricted per se by PIC</b></p> <p><b>Some type of payment and/or contribution goes into a multilateral fund</b></p> <ul style="list-style-type: none"> <li>• No tracing of origin, or need to monitor downstream utilization</li> </ul> <p><b>3.1 – Payment for access to DSI</b></p> <p><b>Payments for access to DSI</b></p> <ul style="list-style-type: none"> <li>• Membership fee for access to DSI in the databases</li> <li>• Payment for individual access to DSI in the databases</li> </ul> <p><b>3.2. – Other payments and contributions</b></p> <p><b>Payment for DSI-related services</b> (e.g. cloud analytics, sequencing equipment)</p> <p><b>Levies on products associated with DSI</b> (e.g. drugs, seeds, enzymes produced with the use of DSI)</p> <p><b>(Voluntary) contributions to a multilateral fund</b></p> <p>...</p>

<p><b>Option 4</b></p> <p><i>Enhanced technical and scientific cooperation</i></p>	<p><b>Enhanced capacity support for developing countries so each country has the capacity and opportunity to access and use DSI</b></p> <ul style="list-style-type: none"> <li>• e.g. research collaborations, trainings, knowledge platform, technology transfer, learning programs, etc.</li> <li>• This option could supplement other policy options</li> </ul>
<p><b>Option 5</b></p> <p><i>No benefit-sharing from DSI</i></p>	<p><b>DSI is not considered equal to GR and therefore there is no obligation to share benefits from its use.</b></p>

### Points for consideration

- Non-exhaustive open lists for assessing policy options on DSI were brainstormed at 1<sup>st</sup> Global DSI Dialogue (Pretoria, Nov 2019)
- Seven draft clusters of “points to consider”:
  - (1) **Deliverables** – e.g. potential to generate benefits, enhance the ability to meet the SDGs
  - (2) **Governance aspects** – e.g. enforceability, inclusiveness and recognition of the priorities of all stakeholders
  - (3) **Operational aspects** – e.g. workable for different types of users, ability to be implemented timely / quickly
  - (4) **Economic aspects** – e.g. cost of setting up / maintaining the system, economic of information
  - (5) **Potential impacts** – e.g. not disruptive to open access, no barriers to attaining the SDGs, etc.
  - (6) **Capacity** – e.g. ability to use DSI globally
  - (7) **Other aspects** – e.g. realistic expectations, consideration of the environmental footprint

### Links to webpages and documents

- Report of First Global Dialogue on Digital Sequence Information on Genetic Resources, 6 – 8 November 2019, Pretoria, South Africa, <http://www.abs-initiative.info/countries-and-regions/africa/south-africa/1st-global-dialogue-on-digital-sequence-information-on-genetic-resources/>
- Introductory Guide to DSI [http://www.abs-initiative.info/fileadmin/media/Knowledge\\_Center/Publications/DSI/Introductory\\_Guide\\_-\\_DSI\\_-\\_ABS\\_Initiative\\_-\\_201908.pdf](http://www.abs-initiative.info/fileadmin/media/Knowledge_Center/Publications/DSI/Introductory_Guide_-_DSI_-_ABS_Initiative_-_201908.pdf)
- DSI Simply Explained Video, <https://youtu.be/ewjuXCDt1Z0>
- Presentation on Points to consider when assessing policy options for DSI, <https://www.youtube.com/watch?v=xJ0ZjpY0VQo>
- Information on DSI events prior to OEWG 3, <http://www.abs-initiative.info/abs-simply-explained/webinars/webinars-dsi/>